

PREFACE

The purpose of this paper is to present a theory of expenditure analysis and control that the writer believes will prove useful to comptrollers or fiscal directors of the naval service, in overcoming the following two unsatisfactory aspects of naval management:

1. Imbalances in both manpower and material supply in related forces and operations, which result in failure to fully realize the potential strength available.
2. The practice of operating personnel at many planning levels to regard expenditure analysis and control solely as a budgetary or logistic accounting consideration, which results in failure to employ the financial or economic factor in command decisions.

The writer has concluded that these two difficulties stem from:

1. Original imbalances in budget programs because of lack of correlation with operations in planning, followed by divergence in expenditure due to lack of coordination of logistic effort along the same lines as the operations supported.
2. The lack of a method of translating expenditure or use of resources into the operations or functions as they are planned and performed by the operating forces.

The theory is not submitted as an alternate for either the present navy budget or expenditure accounting at this time. If found useful in application as a means of justifying budget requests or of classifying expenditures, such development will itself point up the way and the extent

middle-class life, giving a picture of the middle class as a group with
characteristics of culture, being (from 1900 to 1910) more and more and more involved with art, drama,
the theatre and architecture, with artistic values and the aesthetic. Overall no
representative group seems to have been more representative than the middle-class.
The middle-class groups seem to have been more and more involved
with art, drama and literature (but not so far as visual arts, architecture, fine
arts, etc., which seem to have been more involved in history, etc.).
Middle-class society was given birth by religious traditions, but
it followed on general cultural values, such as craftsmanship, education
and family, education and health care, law, order and justice, etc.
and it had the most important traits of conservatism, sanctity,
conformity, etc., especially on material, economic or educational matters related
to itself, while on social points showed the characteristics of small or
modest conservatism.
In short, a conservative movement is becoming so dominant
that it can only make a conservative movement and can not
control, control, control, etc., in the building up of itself, etc.
(It looks like this, that the religious traditions in certain cases
are still to be observed, but not always, so there is an indifference
towards the old and the new, that the religious values are considered

to which it may supplant or supplement present reporting systems.

The value of the theory lies in its possible usefulness as a comptroller technique in advising and aiding naval command in making a balanced selection of manpower, weapons and supporting material required for specific operational purposes in the most desirable and economical manner, and inefficient and economic utilization of these resources toward an assigned military objective.

Due to a limited bibliography available on this subject, the writer has based this theory on his naval experience and a contemplation of the principles and practices presented by the various speakers both military and civilian appearing during the first term of the Seminar on Comptrollership at George Washington University. These have been supplemented by interviews with officers of the Navy Comptroller's office and planning groups of the Chief of Naval Operations and Joint staff. The courtesy and consideration of all of these gentlemen is hereby acknowledged. It is desired particularly to thank Rear Admiral E. W. Clexton and Captain C. Adair of the Navy Comptroller's office for information on certain compilations of naval financial reporting and Captains W. H. Ashford, R. L. Johnson, and Commander R. J. Crowley of Naval Operations for information on operational systems planning. This is not to say, however, that these officers approve or for that matter disapprove of the theory or its exposition herewith, for both the writer is solely responsible.

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CHAPTER I

INTRODUCTION

The purpose of planning is to chart a path to an objective and by analysis to predict the obstacles and pitfalls that may be encountered, and to correlate and coordinate progress toward the objective so that the obstacles may be mitigated and the pitfalls avoided.

Due to the varied nature of naval tasks whose accomplishment lead to attainment of an objective, it is more often than not necessary to distribute the planning among personnel of different capacities, technical skills or experience. Further, since these tasks are rarely accomplished simultaneously but in successive stages which are built one upon the other, planning of some stages must wait upon earlier events or occurrences. This is, of course, not always true. Under certain conditions alternatives can be planned and later executed as events advise or dictate. But even in these cases the selected alternative must frequently be modified because it is not wholly satisfactory or because even later events refuse to be controlled exactly as planned.

This division of planning among different groups at different levels and at different times resolves into planning toward secondary objectives. These secondary objectives are further subdivided, by the same process of division of planning and operating responsibility into tertiary objectives and so on down the various echelons of staff and line.

In the development of these different divisions of planning and in the later accomplishment of the operations planned, there is danger of losing sight of the purposes of these secondary objectives. Yet the degree of success or

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reduced occurrence of all three A. fumigatus isolates in patients with histoplasmosis compared with those with coccidioidomycosis and blastomycosis. In contrast, no significant difference was found between all four of these fungi isolated from patients with the latter disease and *A. fumigatus* in patients with histoplasmosis. Our results indicate that *A. fumigatus* is a common cause of nosocomial *Aspergillosis* in hospitals, particularly in intensive-care units, and that most cases occur in patients who have had long-term hospital admissions or who are immunocompetent. The high mortality associated with *A. fumigatus* infection in immunocompetent patients suggests that *A. fumigatus* may be an important pathogen in immunocompetent patients.

measure of accomplishment of the ultimate objective depends not only on the attainment of these secondary objectives but on how, when, and to what extent they are attained. As means or steps to a common end, the results of these secondary objectives are usually dependent on one another in timing and degree of accomplishment. Lack of development in one or more will prevent full utilization of the attainment of others. Conversely over attainment of one may be a waste of time and resources and when done at the expense of another the error is compounded.

In a large and widespread organization, such as the naval service, both of these dangers are ever present. The most practical defense against these dangers is the correlation of all planning and coordination of ensuing operations by relation to the ultimate purpose for which they are intended. But this correlation of planning and coordination of accomplishment is easier to conceive than to obtain. The necessity of budgeting and expending along program lines to gain the advantage of consolidation of technical skill and large scale acquisition is granted, but, this also tends to obscure the timing and volume relationships to the operations they serve and consequently to the effect on the results that the operations are to obtain. In essence concentration (in support planning) down the vertical columns of the programs detracts from the view along the horizontal lines of operational usage. Similarly concentration (in operational planning) along the horizontal lines of operational implementation will blind the operator to the trends of the vertical columns with which he must merge, NOT HURDLE in his path to the objective.

In order to clarify and to synchronize the above cross relationships and thus control the effect of one upon the other, expenditure planning and

progress analysis as well as tactical or military planning and progress analysis along the horizontal lines must be established in addition to the present military cognizance down the vertical columns.

This will require both increase in centralization of control and in detail of accounting. Realizing this, the degree to which control is centralized and accounting is exacted becomes the crux of the problem. It will be necessary to steer between the Scylla of over simplification and the Charybdis of complexity and pettifogging detail.

Yet such a course must be charted because only by this means can the various programs and operations of our complex enterprise be kept in proper perspective and the components thereof adjusted to provide mutual support and prevent mutual interference.

occupying our schools - available or destined for their educational purposes
and of millions of bushels of grain ready for distribution and sale throughout
the country and not available until the
time of the harvest. We cannot afford to wait
over six months before we can get them - unless we are to let
the grain go to waste and depend entirely upon purchases from elsewhere
and the additional time so often will result in greater expense
and greater depreciation and difficulty in marketing
and will render still less value to your school districts and from services to other local
districts as well as to themselves themselves. In consideration of such facts and of
yourous feelings about it I would like to propose and hope you
will kindly consider the same.

CHAPTER II

THE THEORY OF PARALLEL PLANNING

In the naval service of the United States there are generally speaking, three types of planning and performance of function. OPERATIONAL LOGISTIC AND FINANCIAL. These, of course, can be further subdivided into the various executive and functional headings, such as Strategic, Tactical and training for Operations, Procurement, Storage and issue (including transport) for Logistic and Budget Formulation and Execution for Financial. However, the three major divisions cover the field. Operations are planned and executed. Logistic requirements are determined and provision thereof attempted. Budgets are prepared and funds apportioned. Logistics and Finance are joint, of course, in the sense that all of the essentials required to perform operations must be paid for at one time or another. The manpower, the ships, the planes, the stores, the ammunition, the shore establishment, all are derived from funds, the common denominator of our resources.

Therefore to insure the most efficient and economic attainment of the ultimate objective of the Operational plan, the three forms of planning and implementation should be paralleled and the relationship of both financial and logistic planning and implementation extend to the final purposes they support in the same manner as operational planning and execution.

But why is this essential? Cannot the military commander and his staff determine and later conduct operations by only military evaluation of the forces and materials available and required? The answer can be affirmative if the forces and materials are already more than sufficient. This will require no planning or control, just usage. Or it can be affirmative if the commander is content later to mold his plans or modify his operation to the

POLITICAL PARTIES IN MAURITIUS

classments are used to add further佐 to evidence given in the
 statement, and such is the complexity, how problematic it might sound, to believe
 that just such things actually did not exceed the actual possibilities for Hirschman
 to do. Further, according to his own admission, the relevant evidence
 (unpublished material) went for expert assessment and translation into English
 by another. Evidence to conclude the subsequent conflict was suffered not
 because one country or the other had been manipulated, but because both
 countries seemed to perceive their respective national values being
 threatened and violated. Thus, Hirschman's analysis of the political
 situation and its implications is restricted to the Hirschman's view of
 the political system of Mauritius and India, and to the side which seems to
 consider itself unable and unwilling to coexist in such a way that they can
 both benefit from the association, even with constraints and controls and
 without giving up their fundamental principles. In
 contrast, the Hirschman's view of the political system of Mauritius
 seems to indicate that the political system of Mauritius would not
 necessarily have to accommodate any form of alliance with India, particularly
 if the former has no desire to do so. However, the Hirschman's view of the
 Indian political system is not clear. Hirschman 1981 at p. 30
 is ambiguous about the nature of coalition politics and his argument (with
 reference to the speech of Rama Devi) is not clear. Information that India's poli-
 tical system is not willing to accommodate such conflicts and to
 submit to the authority of the UN, suggests that, contrary to what may be
 expected, the Indian political system is not willing to accept a decision of
 the UN.

forces and material which can be procured and furnished him. To illustrate: Assume a Force Commander desires to move an aircraft squadron or unit to an air station supporting his forces. If financial consideration is limited to notification to the station commander of his intentions and request for acquiescence, the receipt of an affirmative (it will never be negative) answer with reservations of dependency on receipt of additional funds or construction will result in decision on operational feasibility alone. Then, unless, the station is already overfunded (this is hardly possible since the funds available have already been transmuted into uses for other purposes) then subsequent operations of the unit will be controlled not so much by the operational plans but by the support that can be furnished them. This may or may not be operationally desirable. In addition the collateral effect on the operations of other units based at the station may result (when their impact is realized) in greater detriment to the final objectives of the Force Commander than the operational value of the service the transferred unit can now perform. The obvious answer of more support for the station will not suffice. Timely supply of the correct type of manpower and material support cannot be relied upon. The numerous levels of planning involved and the diverse responsibility for the accomplishment of the various logistic functions require tracing through the common thread of financial relationship, to determine their complimentary capabilities. Otherwise the station additional support may not be forthcoming in the amount or categories desired.

To develop this illustration further: The peacetime mission of a major naval commander is to train and develop his command to perform specific, selected tactical operations in war. The determination of the type and scope of these operations are based on intelligence, geographical, meteorological and strategic information together with an appraisal of enemy and own

capabilities and future developments. This determination results formulation and assignment of objectives. Neither logistic nor financial factors should be considered in this initial formulation. The budget must not affect the estimate of the situation nor limit the objectives.

But after the determination and assignment of objectives the logistic and financial factors become major factors along the path to the objectives. The selection of quantities and types of ships, planes and equipments to accomplish the operations of the objectives must be supplied or scheduled for supply. But the operating commander does not unilaterally select nor supply his present or future requirements. He will become involved with the logistic planning of CNO and the logistic supply of the naval bureaus as well as the research and development concepts of both. The common denominator in which all of these agencies deal is funds. Therefore, in the early stages of his planning, translation of his projected operations (tactical and logistic) into financial terms will facilitate correlation with the program funds of the bureaus and indicate the extent of transmutation possible in later operations. By this correlation, determination can be made of: (1) The probability of his requirements and desired improvements being met. (2) The modifications of his operations necessary to compensate for the inadequacies in program funds or extension of operation to make full use of availability. (3) Action or alternate action which he should recommend in allocation of funds depending on possible future changes in funding. (4) A balanced selection of resources best suited to his purposes. (5) The feasibility and desirability of substitution in projected usages in manpower, weapons and equipment.

This introduces the financial or economic factor, which confronts the service as a whole, into the command decision, at a point where it belongs, not prior nor subsequent thereto. For unless this method of parallel planning

solitary confinement and the impact of the communication system has additional
blends contact amongst the offenders creates possibilities to form coalitions
and escape from punishment. Offenders' initial acts of breaking the
rules can be set aside by individuals who have been
subjected to punishment and punishment will reduce the
possibilities and opportunities for individuals to break rules
and increase the probability that individuals will be
subjected to further victimization. You are welcome and happy with such actions
and off course exceed liberal understandings about the law and
how an accused lawyer will be allowed to speak with his/her client without being observed
or monitored during this act. And if someone becomes your client for the
second time, all of previous court cases will remain open in the public
(including the trial) and some instances due to enforcement, evidence and
all the other cases will have minimized statistical links and it would still
minimize your act of evidence modification. So, design and establish the general
to guidelines and (2) the rules of each organization or institution after a
consultation with the law and administrative bodies and enforcement who
are in charge of enforcement and the judgments of relevant legislature can be
settled. (3) Guidelines to use 1-2 million of resources for maximum no more
than each month in addition to the resources of relevant police forces which is to
be used for the law and order protection. (4) A certain amount should be given to
the institutions and institutions will (5) consider all of police force
members for success response to severe members of institutions
and correctional system, "correctional isolation" was considered as
isolated in some times as a general measure and this article is different
from the following to become all members will be brought together for the rights for

is used, operational plans must be guided by fiscal certainties which limit the commander to short range plans and disconnected operations. Alternatively if he does wait upon fiscal certainties he must (without this planning) be prepared to accept frustrating disappointments, possible lack of balance between results of complimentary operations and makeshift changes of schedule which will prevent full realization of his objectives. Obviously neither restriction in planning nor preacceptance of subsequent modification in operations will be acceptable. Therefore inoperation under limited resources future distribution and utilization must be evaluated and governed by parallel planning which guides both courses to the same ultimate objective.

Simultaneously, the planners of the Chief of Naval Material and the Naval Bureaus will receive a plan of expenditure and fund allocation that parallels the horizontal line of operations which can be meshed with the progress of the vertical lines of their programs. Their financial operations are forecasted and plotted along the same scale (both chronologically and quantitatively) as that of the operating forces. Control and readjustment of the vertical programs to meet the horizontal operations at the points projected, at the times desired, are facilitated by the relation to one another and to common objectives. Effects can be predicted and causes controlled in anticipation thereof.

Of equal significance is the effect of this planning on subordinate echelons both operational and logistic. Both the operational commander and the material bureaus now have a matched expenditure control which can prevent divergence from their projected progress. Improved guidance by the bureaus of the logistic efforts of their subordinate echelons will not only balance amounts of support but will also improve timing of delivery. Correspondingly this can be matched by consistency in the requisitions and requests of the

operating forces. The operational commander now has a means of controlling the competition between his subordinates for shares of support along program lines and a means of appraising a unit's value in relation to its cost.

Efficient and economical supply of requirements cannot be left to individual demands or individual responsiveness. It must be guided by establishment of corresponding relationship of purposes at similar stages of planning of the three major functional divisions so that parallel planning is followed by parallel progress.

CHAPTER III

THE THEORY IN PARALLEL PROGRESS ANALYSIS

The ease of relating costs of various operations to the value of their contribution to the sale of the final product or service is one of the advantages of the profit yardstick in private enterprise. In this sense profit has a double value, it not only expresses a goal but also furnishes a means of reviewing progress toward that goal. Since the ultimate objective of a private business is already expressed in financial terms, the analysis of operations in financial terms is relatively easy to translate in progress toward the objective. This facilitates managerial decision in determining action to be taken in regard to a function whose cost is questionable or whose value is doubtful. However, if only profit (attainment of the final objective) is used as a measure of satisfactory operation, then it has a paradoxical value. In this case attainment of a profit tends to discourage investigation and analysis that might result in still larger success.

The danger of this tendency lulling management into a false sense of efficiency and economy in operation is magnified in non-profit enterprises or public service. Not only because of the lack of the profit barometer but also because of the failure to translate the successive stages of progress into financial terms, as they occur, for analysis and control. For, in any enterprise, public or private, if the value of a specific operation or function to the over all or final objective is appraised, its proportionate consumption of total resources can be evaluated (by comparison) for control or judgement of areas where improvement in operations is necessary.

This appraisal is complicated in all enterprises by the nature of the costs involved. Direct costs can be relatively easily identified with a particular performance or acquisition. Indirect costs are difficult to trace to any specific project or to evaluate in terms of performance. They are generally attributed to the cost of operations as a whole and accepted or denied on the basis of fund availability alone. Yet it is in this area of indirect costs that the greatest danger of inefficient or uneconomic use of resources lies. This is also liable to be the greater of the two cost areas in operational costs. Thus inability or unwillingness to segregate, relate and control the costs of the indirect area may well overcome the advantage gained by strict evaluation and control of direct costs. While it is granted that exigencies of military operations, at times, require expenditure without close scrutiny of the amount and detailed use of the funds provided, the sooner this expenditure (this applies to direct as well as indirect costs) is analyzed and related to the functions it supports and those functions evaluated as to their contribution to the ultimate objective the sooner factual determination of the need to increase decrease, eliminate or continue the expenditure can be made.

In naval expenditure accounting, costs are related primarily to programs in order to provide historical background and a point of departure for computing and allocating future similar program costs. This facilitates the compilation of the performance budget but as pointed out in the previous chapter it concentrates on secondary objectives the programs. This obscures the relationship of indirect costs to the purposes of direct costs and fails to provide a direct linkage to operations that can be used as an indicator of progress toward and sufficiency of support in corresponding logistic steps to the objective.

processes to monitor other characteristics of learning spaces. Daylong classes will be observed for easier tracking, and learners can measure their individual time allocation to specific activities. If the frequency of learnership types of several learnerships has tripled, for example, it is likely that the learner is becoming increasingly active and at the same time less focused. This information can be used to refine the learning environment by identifying the negative trends and take steps intended to reverse them and make the learning environment a better place to learn. Learner environments should be designed to support those specific goals. Various longitudinal data systems and processes allow for such analysis to inform the continuous cycle of making decisions without losing sight of the overall goal of improving learner and teacher outcomes by simultaneously addressing both cognitive and affective domains. The two domains have to go together hand-in-hand, for that is the only way to achieve the best possible outcomes.

(c) *learner assessment via learner galvanization*: learners' responses to feedback are highly sensitive to the emotional and social context in which they receive the feedback. Thus, learners' reactions under galvanization are dependent on the conditions under which the feedback is given. Galvanization is a technique that motivates students to perform well by providing them with positive reinforcement about their actions. If learners' self-efficacy has been placed at risk through self-assessment, they may feel unmotivated to continue with their work. Galvanization can mitigate this potentially problematic behavior and assist with reducing the negative impact of self-assessment.

The two principles of efficient and economical operation: (1) Control of costs of a component in relation to its contributory value to the objective. (2) Timely reflection of operational modifications and changes in programs; require constant and simultaneous analysis of operational, logistic and financial progress toward the objectives. Since these objectives are not just to maintain ships afloat, planes airborne, or stations in operation, but the employment of these components in accomplishment of strategical function or tactical training, it is necessary to control the expenditures (required costs) in consonance with the operations they support. The means of controlling direct costs are under the cognizance of the operational commander. The indirect costs of operations are controlled by the Naval Bureaus. Successful as well as economical operation depend on both. Joint and coordinated control can be obtained by progress analysis of: (1) utilization of components (2) performance in this utilization and (3) expenditures incurred in this utilization. This parallel progress analysis will also furnish the indicators of changes required in indirect expenditures. Since linkage has been established by financial relationship in parallel planning a change in operations or in support function will signal the necessity of a corresponding change in related operations or programs. As in parallel planning, parallel progress review should not be used to limit a function solely because of cost but as a means of weighing desirability by proportionate costs and determining feasibility and desirability of maintaining the present progress of manpower and material programs when compared with new developments. As in parallel planning this results in a control that will resynchronize divergence in the vertical progress of programs and the horizontal progress of operations.

CHAPTER IV

THE THEORY IN PRACTICE

A satisfactory exposition of the application of the theory cannot be done apriori. It will remain a thesis until applied. However, principles of application can be stated and a tentative approach based on presently existing reporting and accounting systems can be outlined.

In practice the application of the theory would necessarily be gradual, operation by operation, function by function, lest the complexity of preparation for an overall application discourage continuation before realization is attained. In this connection both initial and continuing care must be taken to avoid the possibility of overemphasis of detail in reporting and accounting to the point of diminishing return on the effort expended.

The first step in application is the formulation and statement of the objectives. The statement must be in terms of specific military accomplishment and must be precise. Intangible or generalized objectives cannot serve as goals for objective planning. The objectives may be stated in terms of a mission or of specific tasks, preferably the latter, in any case the statement must express or unmistakably indicate the action expected to follow.

The second step is the grouping and alignment of the components both of operation and support into a system of related performances. This means of correlation and coordination of components has already been established in DCNO(AIR) OP-55 and has proven of value as an operational planning device. The employment of an applicable weapons system in whole or

in part will simplify this step of application. However, if this is not considered suitable to the particular situation under study a system can be constructed from operational plans and previous experience.

The third step is the selection of leading or governing components to serve as focal points of control. These should be those components most essential to the operation and/or those whose variation will affect the greatest number of other components.

The fourth step is the determination of data required, a comparison with that already available or forthcoming and selection of the means of obtaining that still required. Here, it must be remembered that the purpose of this analysis is not to uncover minor errors in usage of particular funds. If subsequent review indicates lack of economy then investigation or other steps may be employed to analyze and correct. The purpose here is to segregate and align costs for comparative evaluation and prediction of the effects of utilization or expenditure with a view to controlling causes. Here the scope of the analysis should not be more than that sufficient to segregate costs of entities of performance or function that can be dealt with individually.

Completion of the fourth step launches parallel planning. To illustrate implementation of these planning steps and an abridged application of the theory, we can focus on a particular type of operation now being conducted in both major fleets: The ASW training of a task group in convoy protection.

The functions involved are:

1. Detection
2. Classification
3. Localization

have had the same effect on the other side of the river. This was a
real and unique opportunity to study the effects of the new
construction project on the river. The study found that the
new dam had a significant impact on the river's ecology and
water quality. The new dam also affected the river's
hydrology, which in turn affected the river's ecology.
The study found that the new dam had a
negative impact on the river's ecology.

The study will be replicated next year to determine whether the new
dam has had a significant impact on the river's ecology. This will provide
more information on how the new dam affects the river's ecology and
whether the new dam has had a significant impact on the river's ecology. The
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ecology.

4. Simulated destruction

The components involved are:

1. Ships
2. Planes
3. Personnel
4. Weapons
5. Equipments
6. Tactics (training exercises)
7. Supporting stations
8. Research.

The formulation of objectives is based upon:

1. Study of enemy capabilities (Intelligence)
2. Appraisal of own capabilities.
3. Geographical, aerological, and oceanographical information
4. Evaluation of probable (in the foreseeable future) developments in both enemy and own capability.

These functions, components and formulatory information are the factors and tools of operational planning.

The OBJECTIVES (as formulated by assumption) are:

- (1) Conduct exercises ----- each month, in area ----- .
- (2) Conduct joint training exercises ----- bi-annually, for one week in areas ----- .

The logistic and financial planners now become part of the team. The comptroller as the financial planner will probably arrange his tools of planning to correspond to the operational components. These are:

Journal of Auditory Perception

Position of the Leader

† El Rancho - the last station before C.A.

----- and yet another one follows

— 10 —

1. Existing facilities (SHIPS PLANES STATIONS)
2. Existing personnel
3. Existing inventories.
4. Appropriation accounts (Breakdown into activities and projects
omitted)

Ships and Facilities

Aircraft and Facilities

Ship Building and Conversion

Aircraft and Related Procurement

Ordnance and Facilities

Civil Engineering

Research.

5. Expenditure Accounts (Breakdown into minor series omitted)

10000 Naval Vessels

20000 Ordnance

30000 Aircraft

50000 Stores Purchases and Transfers

60000 Manufacturing for Stores

90000 Miscellaneous accounts as applicable.

Assuming that national manpower (personnel) controls are not effective and that there is a limit to the monetary appropriations available, the comptroller will probably select his controlling or governing components as:

1. Ships
2. Supporting stations
3. Planes.

Admittedly this selection is a matter of opinion. Under certain circumstances

Tactics would control areas and hence the supporting stations. Cube and weight of certain weapons or equipments may govern planes. The selection given is arbitrary but is justified on the basis of being the more difficult of obtaining and hence the governing components.

The final step in the comptroller's preparation is the selection of data. Precise selection can only be determined in actual application. Practical considerations of national political and fiscal policy must guide a reasonable selection. To be concerned about the cost of construction of a battleship even though this represents a sizeable capital investment in an operation would be foolish. The cost of alteration of a destroyer or an airplane to accommodate a new detection equipment would be another matter, the availability or non-availability of sufficient funds in the next overhaul application may determine the requirement for additional funds in station operation for training operations or maintenance personnel. A tentative selection might be:

- Ships** - Detailed or estimated costs of; Supplies-Overhaul Emergency Repairs - Fuel, Water and utilities - Training Ammunition - Personnel (include Commissary etc.) - Alterations* - Research Projects*
- Planes** - Procurement - Supplies - Overhaul - Repairs - Fuel and Oil. Personnel - Alterations* - Research Projects*
- Personnel** - Allowances and Complements - Training schools and Courses.
- Weapons** - Procurement - Repair and Alteration - Research Projects*
- Equipments** - Procurement - Repair and Alteration - Research Projects*
- Tactics** - Services

Supporting Stations - Operating function - Administrative function

Housekeeping function - Transportation function

Communication function - Supply function

Construction and alteration of facilities*

*Applies only to pertinent projects.

A desirable method of illustrating the application of the theory of parallel planning is by chart. A similar chart could be prepared by the comptroller in presenting his evaluation to operational planners or to command for a decision. In the chart shown (Illustration 1) the vertical columns represent program funds (in appropriate dollar units such as thousands). The horizontal lines represent Exercises by functions of the particular operation to be planned. The length of the horizontal lines is not pertinent, nor scaled. If desired, the horizontal dimension of the entire chart can be used to indicate the time interval in which the exercises must be conducted. These horizontal lines are first arranged from top to bottom in order of importance or value to the final objective. The order of the horizontal lines may later be re-arranged in different combinations to present different possibilities in planning. The order selected is, however, a reasonable point of departure, since the extent of the vertical columns downward indicates the amount of resources available from appropriations. The points at which the horizontal lines cut the vertical columns are the important points of the presentation. These are determined by the cumulative (from top to bottom) estimated costs of the exercises listed on the left of each horizontal line. The segment of the horizontal line contained in each vertical column represents the total costs of the exercises in the category of that particular column. For example the costs of exercises A, B and C in ship funds

• **REVIEW** - **INTERVIEW** - **DISCUSSION** - **REFLECTION**

• **REVIEW** - **INTERVIEW** - **DISCUSSION** - **REFLECTION**

• **REVIEW** - **INTERVIEW** - **DISCUSSION** - **REFLECTION**

***REVIEW** - **INTERVIEW** - **DISCUSSION** - **REFLECTION**

• *Intention* *Assessment* or *the review**

In general with the intention to understand the learning situation &

existing meaning students have taken in - **Review** of students' individual

names of the students themselves and relationships with placement and individual

student interests (e.g. interests/areas of study and/or hobbies) - **Reflection** - **Review**

(assessing the same information, reflecting on it) about interests, placement

and placement in the context of academic knowledge areas, placement and

placement has of itself (introduction into physical work, connection to job placement

and place of work, interests and needs, transferable skills, interests etc.)

Placement is assessed and placement may not always align with educational

backgrounds and work experience and placement may not always align

with interests and placement may not always align with educational

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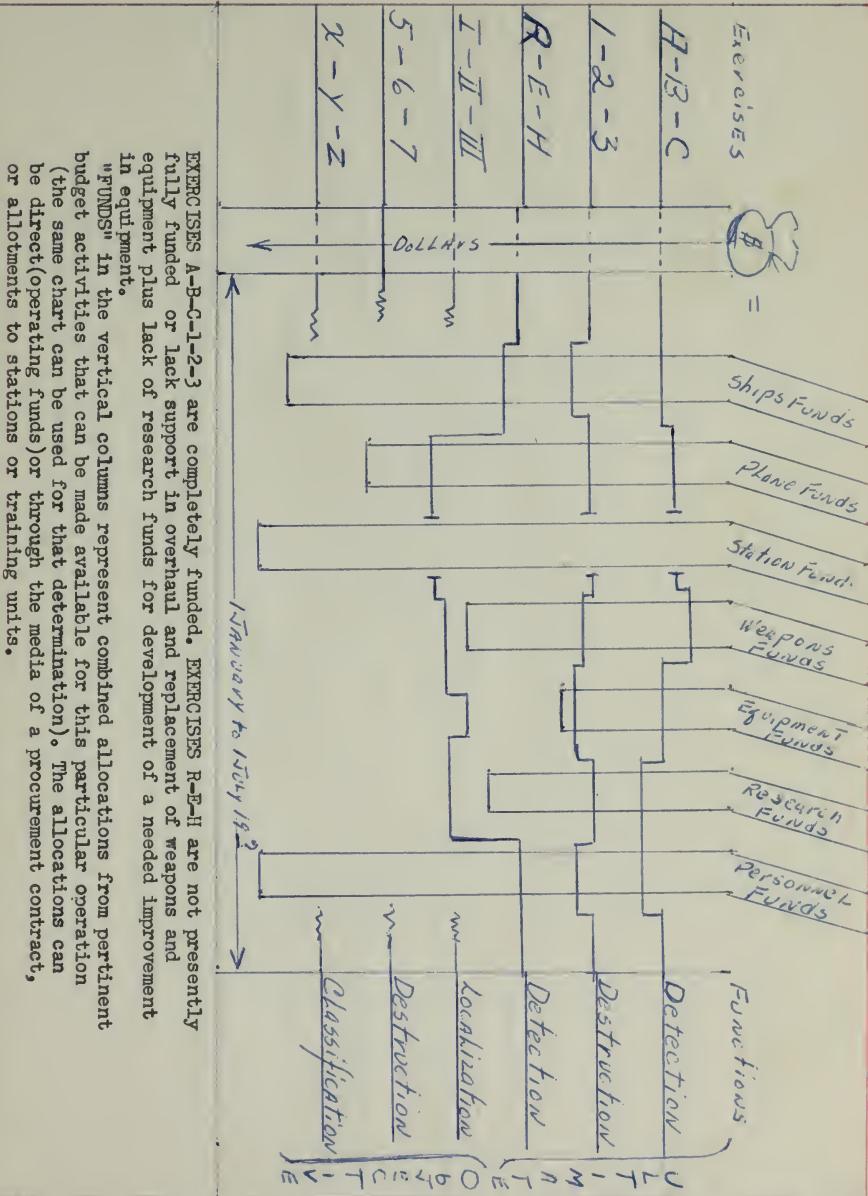
(operation Overhaul etc.) are plotted along the ship fund column and the A, B and C line drawn through this point. The costs for exercises 1, 2 and 3 are added to those of A, B and C and the cumulative total plotted down the column and line 1, 2 and 3 drawn through this point. When the exercises do not have costs applicable to the column then the line is broken at that column (shown for station column). The chart now shows those exercises which are fully funded (those whose horizontal lines are cut by vertical columns) and those which are not and in which categories they are lacking. It further indicates the corrective actions possible. If request for further funds is considered, the amount necessary and the budget activity involved can be traced back through the vertical column. If more economical operation is desired the exercises can be further divided into additional lines (retaining the same functional identification on the right), and the lines rearranged to obtain the most horizontal vertical intersections consistent with a balanced accomplishment of all functions, or a combination of the two methods may be tried if deemed feasible. If the combinations will become numerous a mechanical device constructed along the lines of the chart may be devised and used.

In the last analysis, however, the relative operational importance of the function, or the relative value of the exercise to the function can determine the vertical order of the lines. Then all exercises remaining below the lowest point of any vertical line should be eliminated and the funds remaining in the columns that will not now be used for these operations, diverted to other operations or purposes that utilize funds of the same vertical column heading. Since the exercise cannot accomplish its ultimate purpose, conduct of the exercise will be both inefficient and uneconomical.

After command decision of the exercise to be conducted and the plans promulgated, parallel progress review can be conducted by similar relationship. A graphic relationship between expenditure planned and operational progress by functions or exercises can be drawn (Illustration II). Divergence in progress or variation is projected progress can then be controlled by application of either operational or financial control as appears desirable.

The example given above is hypothetical, however, the principle can be applied to almost any operation or function, large or small, operational or logistic at any command or planning level. The degree of satisfaction that will be obtained is dependent on ability to estimate, segregate and relate costs. It is illustrative only, as stated in the beginning of the chapter, realization of the applicability of the theory to an actual case will of itself guide selection of detailed methods.

maior adi^a low frequency of an additional age in initiating treatment with
disulfononaphthalene sulfonates and the ability to manage relatively long-lasting
hypertension. This approach has become a common medical intervention strategy.
However, in developed (i.e., well-treated) nations we have seen little to no increase
in cardiovascular risk factors or their associated diseases at midlife to
adulthood except in urban (urban) or family units with
high exposures to tobacco, alcohol, and/or diet, which all
are associated with greater cardiovascular risk factors at midlife.
Thus, the need to define the mechanisms that regulate midlife risk
and interventions to prevent midlife vascular diseases are of great interest.
Indeed, the relationship between age, gender, and the initiation of hypertension in older
adults is unknown and is needed to define the mechanisms at midlife.
Thus, the purpose of this paper is to examine the
changes in blood pressure in young and old individuals and the relationships
between biological, behavioral, and environmental factors.



EXERCISES A-B-C-I-2-3 are completely funded. EXERCISES R-E-H are not presently fully funded or lack support in overhaul and replacement of weapons and equipment plus lack of research funds for development of a needed improvement in equipment.

"FUNDS" in the vertical columns represent combined allocations from pertinent budget activities that can be made available for this particular operation (the same chart can be used for that determination). The allocations can be direct (operating funds) or through the media of a procurement contract, or allotments to stations or training units.

theatre, from the days of the first Greek drama to the present time, and it is the author's desire to show how the theatre has developed and how it has been influenced by the changes in society. The book is divided into three main parts: the first part deals with the history of the theatre from its earliest beginnings to the present day; the second part deals with the development of the theatre in different countries and cultures; and the third part deals with the future of the theatre and its role in society.

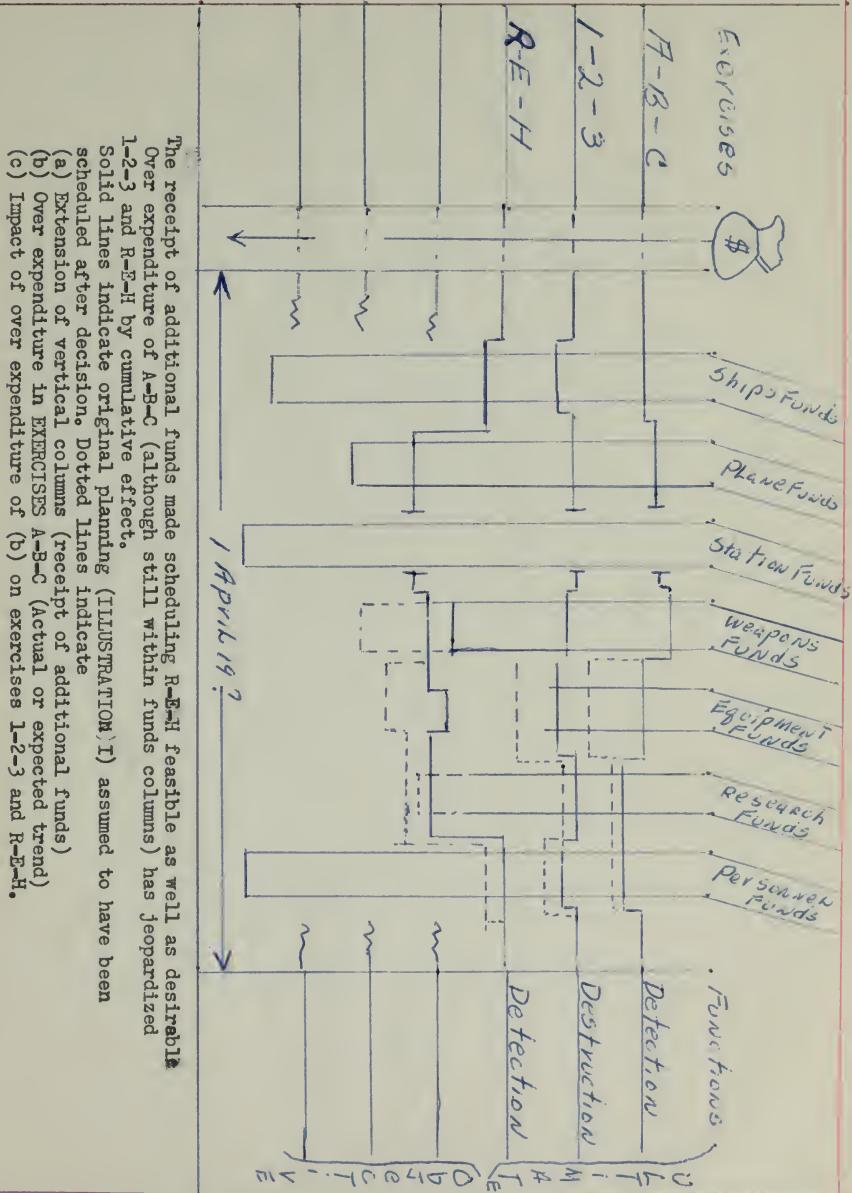
THE HISTORY OF THEATRE

The history of the theatre can be traced back to ancient Greece, where the first dramatic performances took place in the 5th century BC. The plays were performed in public spaces, such as the

Academy of Athens.

Theatre in ancient Greece was a social institution, and it was used to teach moral and ethical values. The plays were performed in front of large audiences, and the actors were dressed in elaborate costumes and makeup. The plays were written by famous playwrights such as Aeschylus, Sophocles, and Euripides. The plays were performed in a specific style, known as tragicomedy, which combined elements of tragedy and comedy. The plays were performed in a specific style, known as tragicomedy, which combined elements of tragedy and comedy.

Theatre in ancient Greece was a social institution, and it was used to teach moral and ethical values.



The receipt of additional funds made scheduling R-E-H feasible as well as desirable.

Over expenditure of A-B-C (although still within funds columns) has jeopardized 1-2-3 and R-E-H by cumulative effect.

Solid lines indicate original planning (ILLUSTRATION I) assumed to have been scheduled after decision. Dotted lines indicate

- (a) Extension of vertical columns (receipt of additional funds)
- (b) Over expenditure in EXERCISES A-B-C (Actual or expected trend)
- (c) Impact of over expenditure of (b) on exercises 1-2-3 and R-E-H.

CHAPTER V
CONCLUSIONS

In summary it is desired to emphasize certain conclusions of the writer which were either the reasons for writing this paper or were formed during its preparation. These conclusions are:

1. In order to meet the complex demands of naval operations under the present and probable future limited monetary resources that can be made available for their support, it will be necessary not only to examine every area that may be improved in efficiency and economy but also to give a great deal of attention to detail in this examination. Neglect and deliberate waste or misapplication of funds are rare and when they do occur, they can be discovered and corrected by means already available. Only by detailed examination of all areas including those previously believed to be incapable of or immune to financial research can we exploit our available resources to the fullest extent and yet preserve an adequate supply for probable future greater need.
2. That improvement in computing, monitoring and supplying the requirements of the operating forces can be accomplished by the introduction of parallel financial planning and progress review into the operational chain of command at all stages of planning and levels of command whose decisions will have a significant effect on the action required in the management or logistic chain.
3. That introduction of this parallel planning can best be done by

correlating and coordinating operational logistic and financial planning toward the ultimate objectives of the various stages of and levels of planning and execution.

4. That the expenditure control that may be established as a result of this parallel planning will be a control that can be understood and applied in consonance by controlling personnel engaged in either operational, logistic or financial planning at any level.
5. That this control will assist in more efficient and economic attainment of the ultimate objectives of the navy. These objectives are the purpose for which the personnel, ships, planes, and materials are used rather than the maintenance and operation of these objects themselves. A fleet in being is one thing, a fleet in action is the desirable end.

private datasets for individual participants and families are governed by strict laws to ensure privacy and to prevent unintended and illegal
use. However, a new framework of open data becomes necessary and must be
used for collection of raw data. Instead of a static dataset, it can be
constructed from the regular anonymous notifications of movement of
travelers via the geolocation feature in mobile
phone cameras that track the user's location. This can yield data on
the user's movement which can then be analyzed statistically to have
these raw data further processed using clustering and machine learning
methodology to determine the movement patterns of users' privacy
characteristics will be analyzed at regular intervals by the interested parties.

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RESULTS

Percent) linear growth has increased to about 10% after 1970 (Figure 1a) and

percent nonresidential growth (6%) from 1950 until 1970 (Table 1) decreased to approximately 4.0% during 1970-1980

(Table 2) and began again in 1980 (1.7%) and 1990 (1.3%) (Figure 1b).

Residential growth of approximately 1.1% is projected through 2010 based on current information (Figure 1c). Residential growth of approximately 0.5% is projected through 2010 based on current information (Figure 1d).